

KVALIASHVILI, A.A.; MAMAMTAVRISHVILI, D.G.; TATISHVILI, M.V.

Spontaneous regression of giant cell tumors of long bones.  
Khirurgia 40 no.5:115-119 My '64. (MIRA 18:2)

1. Kafedra rentgenologii i radiologii Tbilisskogo meditsinskogo instituta (zav.- prof. A.A. Kvaliashvili) i vtoraya kafedra khirurgii Tbilisskogo instituta usovershenstvovaniya vrachey (zav.- prof. D.G. Mamamtavrishvili).

USSR/Human and Animal Morphology (Normal and Pathological). Endocrine System.

S-5

Abs Jour: Ref Zhur-Biol., No 16, 1958, 74381

Author : Tatishvili, M. Ya., Toidze, Sh. S.  
Inst : Institute of Experimental Morphology,  
AS Georgian SSR.

Title : On the Question of Individual Variation of  
the Position of Adrenal Glands.

Orig Pub: Tr. In-ta eksperim. morfol. AN GruzSSR, 1957,  
6, 163-173

Abstract: It was shown in 100 cadavers of adult humans that the adrenal glands (AG) are located on the level of the Xth thoracic - II<sup>nd</sup> lumbar vertebrae. On the average, the right AG is located from the middle third of the body of the Xth thoracic to the upper third of

Card : 1/3

USSR/Human and Animal Morphology (Normal and Pathological). Endocrine System.

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Abs Jour: Ref Zhur-Biol., No 16, 1953, 74381

the body of the 1st lumbar vertebrae, and the left AG± from the lower third of the body of the XIth thoracic to the middle third of the body of the 1st lumbar vertebrae. The left AG is more frequently lower than the right. The right central vein, located between the AG and the liver, in 25% of cases runs upwards, in 52%, upwards and medially, in 19%, medially and in 1%, medially and down and enters into vena cava inferior. In 3% of the cases, it enters into one of the veins of the liver; in 1%, into the angle between the vena cava inferior and the renal vein and, in 3%, two right central veins are

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USSR/Human and Animal Morphology (Normal and Pathological). Endocrine System.

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Abs Jour: Ref Zhur-Biol., No 16, 1958, 74381

noted. Projection of AG on the posterior surface of the body between the vertebral and paravertebral lines by high location of AG falls on the region from the Xth rib to the XIth intercostal space and by low location of AG, under the XIIIth rib. On the left, in 90.6 and on the right in 64.4% of cases, the lower limit of the phrenicocostal sinus intersects diagonally the projection of AG; more rarely, the projection of AG lays above (correspondingly 5.9 and 33.3%) or below the lower limit of the phrenicocostal sinus (3.5 and 2.3%).

Card : 3/3

TATISHVILI, M.Ya.

Intraorgan changes in the renal vessels following ligation of the ureter. Soob.AN Grus.SSR 23 no.6:741-744 D '59. (MIRA 13:6)

1. AN GrusSSR. Institut eksperimental'noy morfologii, Tbilisi.  
Predstavleno akademikom A.N.Matishvili [deceased].  
(KIDNEYS--BLOOD SUPPLY) (URETER--LIGATURE)

TATISHVILI, M. Ya.

Intraorganic relationships of the venous system of kidneys. Trudy  
Inst. eksp. morf. AN Gruz. SSR 8:105-112 '60. (MIRA 14:10)  
(KIDNEYS--BLOOD VESSELS)

TATISHVILI, M. Ya.

Topography of adrenal glands. Trudy Inst. eksp. morf. AN Gruz. SSR.  
8:151-169 '60. (MIPA 14:10)

(ADRENAL GLANDS)

TATISHVILI, M.A.

Morphology of the lymphatic system of kidneys. Trudy Inst. eksp.  
morf. AN Gruz. SSR 8:261-268 '60. (MIRA 14:10)  
(KIDNEYS) (LYMPHATICS)

TATISHVILI, M.Ya.

Morphological basis of the hepatorenal syndrome. Soob.AH Gruz.  
SSR 25 no.1:87-90 JI '60. (MIRA 13:10)

1. Akademiya nauk Gruzinskoy SSR, Institut eksperimental'noy  
morfologii im. A.N.Katishvili, Tbilisi. Predstavleno akademikom  
A.P.TSulukidze.

(LIVER--DISEASES)

(KIDNEYS--DISEASES)

TATISHVILI, M. Ya., Dr. Medic. Sci. (diss) "Interaction of Renal Urinary and Vascular Systems and Hepato-Renal Venous Connections," Tbilisi, 1961, 48 pp. (Tbilisi Medic. Inst.) 200 copies (KL Supp 12-61, 282).

TATISHVILI, M.Ya.

Changes in the relationship between the urinary and vascular  
system of the kidney in different diseases. Trudy Inst. eksp.  
morf. AN Gruz. SSR 10:253-268'62. (MIRA 16:6)  
(KIDNEYS--DISEASES)

TATISHVILI, N. I., Cand Med Sci -- "<sup>Om</sup>~~Concerning~~ certain  
problems of brucellosis pathology in ~~an~~ experiment."  
Tbilisi, 1961. (Tbilisi State Med Inst) (KL, 8-61, 265)

- 527 -

TATISHVILI, N.I.

Some aspects of the diagnosis of brucellosis. Azerb. med. zhur. no.8:  
89-90 Ag '61. (MIRA 15:2)

1. Iz Nauchno-issledovatel'skogo instituta meditsinskoy parazitologii  
i tropicheskoj meditsiny imeni S.S.Virsaladze Ministerstva zdravookh-  
raneniya Gruzinskoy SSR. (BRUCELLOSIS)

TATISHVILI, N.I.

Some results of a histochemical study of lymph nodes, the spleen,  
and the liver in experimental brucellosis. Soob. An Gruz. SSR 26  
no.5:607-614 My '61. (MIRA 14:8)

1. Nauchno-issledovatel'skiy institut meditsinskoy parazitologii  
i tropicheskoy meditsiny imeni S.S. Virsaladze, Tbilisi. Predstavleno  
akademikom V.K. Zhgenti.  
(BRUCELLOSIS) (GLYCOGEN) (NUCLEOPROTEINS)

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**CIA-RDP86-00513R001755120001-9"**



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ZARIDZE, G.M.; MATRISHVILI, R.P.; DZHEV KHISHVILI, S.I.

Granitoids and crystalline schists in the Klukher section of the  
Greater Caucasus. Trudy Inst.geol. AN Gruz.SSR. Min. 1 pstr.ser. 4:  
155-200 '58. (MIRA 12:11)

(Caucasus--Granite)

(Caucasus--Schists)

AYALIANI, V.L. [deceased]; RAZMADZE, G.S.; TATISHVILI, Ye.M.

Physicomechanical properties of the "wood" of moso, madake, and Chinese madake bamboo stalks. Report no. 1. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki 4 no.6:563-573 '51. (MLRA 9:8)

1. Gruzinskiy ordena Trudovogo Krasnogo Znameni sel'skokhozyaystvennyy institut imeni L.P. Beriya, Tbilisi.  
(Bamboo)

AVALIANI, V.L. [deceased]; RAZMADZE, G.S.; TATISHVILI, Ye.M.

Physicomechanical properties of the "wood" of moso, madake, and Chinese makade bamboo stalks. Report no. 2. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki. 4 no.7:675-687 '51. (MLRA 9:8)

1. Gruzinskiy Ordena Trudovogo Krasnogo Znameni sel'skokhozyaystvennyy institut imeni L.P. Beriya, Tbilisi.  
(Bamboo)

~~TATISHVILI, Ya. M.~~

Relationship between the physicommechanical properties and  
features of the anatomical structure of wood. Izv. AN Arm. SSR.  
Biol. i sel'khoz. nauki 10 no.3:85-88 Mr '57. (MLRA 10:5)

1. Gruzinskiy ordena Trudovogo Krasnogo Znameni sel'skokhozyaystvennyy  
institut, Kafedra lesnoy taktsii, ekonomiki i organizatsii  
lesnogo khozyaystva i lesoksplyuatatsii, Tbilisi.  
(Wood)

~~TATISHVILI, Y. M.~~

Effect of growing conditions on the anatomic structure of eucalyptus  
wood. Soob. AN Grus. SSR 18 no.3:349-355 Mr '57. (MIRA 10:7)

1. Gruzinskiy Ordena Trudovogo Krasnogo Znameni sel'skokhozyayst-  
vennyy institut.

(Eucalyptus)

TATIEV, D.P.

The utilization of cartographic paper Moskva, Izd-vo geodezicheskoi i kartograficheskoi lit-ry, 1941. 99 p. (49-33910)

TS1109.T3

TATIYEV, D.P.; PUS'KOV, V.V., redaktor; SHLENSKIY, I.A., tekhnicheskiy redaktor

[Conditioning of offset paper] Akklimatizatsiya ofsetnoi bumagi.  
Moskva, Izd-vo geodez. i kartogr. lit-ry, 1951 128 p. (MIRA 10:1)  
[Microfilm]  
(Paper)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755120001-9"

TATIYEV, K.I. \* Sudebnaya meditsina (Forensic Medicine) 1947.

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927.640.  
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SMOL'YANINOV, Vladimir Mikhaylovich, prof.; TATIYEV, Konstantin Ivenovich,  
prof.; GIERVAKOV, Vasilii Fedorovich, prof.; RYABOV, G.Z., red.;  
ZAKHAROVA, A.I., tekhn.red.

[Forensic medicine] Sudebnaya meditsina. Moskva, Gos.isd-vo med.  
lit-ry, 1959. 367 p. (MIRA 13:5)  
(MEDICAL JURISPRUDENCE)

TATIYEVA, K.G.

Age and faunistic characteristics of boundary horizons between Eocene and Oligocene deposits of the Akhaltsikhe Depression. Dokl. AN SSSR 143 no.2:409-412 Mr '62. (MIRA 15:3)

1. Institut paleobiologii AN Gruzinskoy SSR. Predstavleno akademikom D.V. Nalivkinym.  
(Akhaltsikhe region--Paleontology, Stratigraphic)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

Reaction zones in the reduction of magnetite and hematite with hydrogen. G. I. Chufarov and E. P. Tatlevskaya. *Acta Physicochim. U. R. S. S. J.* 957-74(1935); cf. *C. A.* 31, 249.—The reaction is autocatalytic. The change in porosity with temp. and degree of reduction was studied and related to the reaction rate. Magnetite is less porous than hematite, but below 600° the rate of reduction is faster. Above this temp. the porosity and the rate of reduction decrease rapidly in both cases. Microscopical investigations show the presence of the layers  $\alpha$ -Fe-Fe<sub>2</sub>O<sub>3</sub> in the case of magnetite and  $\alpha$ -Fe-Fe<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub> in the case of hematite, while FeO could not be detected, and it is suggested that Fe<sub>2</sub>O<sub>3</sub> → Fe is the rate-dets. process. The rate of advance of the reduction zone is linear below 500° and the activation energy for hematite is 15,700 g.-cal. B. C. A.

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PROCESSES AND PROPERTIES INDEX

Effect of the porosity of silica gel as a catalyst carrier on the velocity of oxidation of sulfur dioxide gas. O. I. Goufarov, R. P. Tatlevskaya and K. I. Kul'pina. *J. Phys. Chem. (U.S.S.R.)* 6, 182 (1935).--V<sub>2</sub>O<sub>5</sub> on SiO<sub>2</sub> served as catalyst. Changes in the porosity of the catalyst up to 70% were made. At low temps. the effect of porosity on yield is greatest. At 400° the yield is almost a linear function of porosity. At 620° the effect is less. With increasing porosity the temp. of the max. yield of SO<sub>2</sub> is lowered. Reaction velocities given in the tables change with the value of the "working surface." Activation energies are the same for catalysts of various porosities but increase from 21,500 at 430° to 40,000 at lower temp. (300°).  
Zelikov

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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LIST AND THE CRITERIA PROCESSES AND PROPERTIES INDEX

*Comparison of initial velocities of reaction of oxides of iron with hydrogen and carbon monoxide and their mixtures. G. I. Chubarov and H. P. Tsjevskaya. J. Phys. Chem. (U. S. S. R.) 6, 833 (1952). - Near 500° the reduction of hematite is much slower by CO than by H<sub>2</sub>. At higher temps. (near 700°) the ratio of the velocities approaches the ratio of impinging moles of the two gases. As a result of the smaller no. of active centers at higher temps. the abs. values of the reduction velocities are small. At 500° the presence of CO in mixts. of CO + H<sub>2</sub> decreases the reduction below that expected for the partial pressure of H<sub>2</sub>, because of adsorption of CO on a large no. of the active centers. P. H. Rathmann*

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Effect of water vapour on the rate of reduction of iron(III) and hematite by carbon monoxide. *Phys. Chem. USSR*, 1910, 14, 319-366. The rate of reduction of  $Fe_2O_3$  vapour added to CO strongly retards the reduction of  $Fe_2O_3$  at 800° and especially at 600°. The retardation is more pronounced if the  $Fe_2O_3$  was already partly reduced. Reduction of  $Fe_2O_3$  is not affected by  $H_2O$  at 600° or 800° unless  $Fe_2O_3$  is already partly reduced.  $H_2O$  has no sp. effect, it gives with CO on Fe oxide catalysts (CO) and  $H_2$  and its apparent action is due to CO. CO does not retard the reduction of  $Fe_2O_3$  to  $Fe_3O_4$ . The inhibition of the reduction of  $Fe_2O_3$  can be accounted for by considering the competition between CO and  $H_2O$  for the magnetite surface. J. J. H.

**Kinetics of reduction and dissociation of metal oxides.**

R. B. Zaitsevskiy and I. I. Chufarov. *Bull. acad. sci. U.S.S.R. Class. sci. ser. B*, 1946, 1005-14 (in Russian). — The problem of existence or absence of correlation between the dissociation equilibrium and the kinetics of dissociation and dissociation of oxides was investigated on CuO and Cu<sub>2</sub>O. The equilibrium pressures  $p$  of O<sub>2</sub> were calculated from the heats of dissociation  $H_{298}^{\circ}$  and entropies  $S_{298}^{\circ}$  at 298°K. by log  $p/p^{\circ} = - (H_{298}^{\circ}/4.573T) + (S_{298}^{\circ}/4.573) + [a/(T/298)^2 - \ln(T/298)] + (298/T) - 1$ . Substituting the heat values, one finds, at 300, 450, 600, 900, 1200°K., resp., for 2CuO = Cu<sub>2</sub>O + 1/2O<sub>2</sub>,  $p = 1.2 \times 10^{-10}$ ,  $2.2 \times 10^{-10}$ ,  $8.3 \times 10^{-11}$ ,  $2.4 \times 10^{-11}$ ,  $3.3 \times 10^{-12}$  atm.; and for Cu<sub>2</sub>O = 2Cu + 1/2O<sub>2</sub>,  $p = 4.4 \times 10^{-10}$ ,  $5.5 \times 10^{-10}$ ,  $1.8 \times 10^{-10}$ ,  $4.8 \times 10^{-11}$ ,  $1.9 \times 10^{-11}$  atm., resp. Agreement with experimental data for CuO is very good. It follows that the dissociation pressure of CuO at the given temperature interval is about 10<sup>3</sup> times higher than that of Cu<sub>2</sub>O. In contrast thereto, the rates of reduction of both oxides by H<sub>2</sub> were found to be approximately equal, and measurements with initial H<sub>2</sub> pressures of 200, 100, and 50 mm. Hg, at 200 and 250°. At the latter temperature 40 mm. Hg, 1 g. oxide, CuO evolved 0.088 g. O<sub>2</sub> in 100 min., Cu<sub>2</sub>O 0.110 g.; the rate of reduction of Cu<sub>2</sub>O is somewhat higher throughout than that of CuO. Complete reduction of 1 g. Cu<sub>2</sub>O at 250° at initial H<sub>2</sub> = 200 and 100 mm. Hg, requires 15-20 and 30-60 min., resp. Both CuO and Cu<sub>2</sub>O show a maximum rate of reduction at the about half-way completion of the reaction, that is the kinetic curves of rate against time (or remaining H<sub>2</sub>) are bell-shaped. From the rates at 200 and 250°, the apparent activation energies of reduction are found to be, for CuO, 13.3 kg.-cal./mol., for Cu<sub>2</sub>O, 13.8 kg.-cal./mol., that is, very close. The rate of dissociation of CuO into Cu<sub>2</sub>O and O<sub>2</sub> is a linear function of the difference between the equilibrium pressure of O<sub>2</sub> and the prevailing pressure: at 2 mm. O<sub>2</sub>, 0.0012 and 0.0058 g. O<sub>2</sub>/min. are evolved by 1 g. CuO at 850 and 900°, resp.; for very small O<sub>2</sub> pressures, the rate tends to a finite value which is many times smaller than that of reduction by H<sub>2</sub>. The activation energy for the dissociation CuO = Cu<sub>2</sub>O is 49.0 kg.-cal./mol., from the rates at 850 and 900°. Since there is no relation between equilibrium and rate of dissociation, and the rate of reduction, the latter reaction is obviously wholly governed by adsorption of H<sub>2</sub> on the oxide surface. By the Brunauer-Emmett-Teller method of low-temperature N<sub>2</sub> adsorption, the surface areas of CuO and Cu<sub>2</sub>O were found to be 0.231 and 0.167 sq.-m./g., resp. The surface areas are thus of the same order of magnitude, which accounts for the approximate equality of the rates of reduction. The slight difference in favor of Cu<sub>2</sub>O can be ascribed to a higher number of active centers owing to removal of O atoms from the lattice as compared with CuO.

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N. Thon

TATIYEVSKAYA, Ye. P., CHUFAROV, G. I., and ANTONOV, V. K.

"Kinetics of the Reduction and of Dissociation of the Oxides of Manganese," Dok. AN, 58, No. 9, 1947

*CV*

**Kinetics of reduction and of dissociation of manganese oxides.** *Chufarov, G. I., Chufarov, and V. K. Antonov (Ural Branch Acad. Sci. U.S.S.R., Sverdlovsk). Izv. Akad. Nauk S.S.S.R., 1984, No. 1, 1949, 371-81; cf. C. I. 41, 1980.* Equil. and velocity of the reduct. and of reduction to MnO by H<sub>2</sub> were detd. for powders of Mn<sub>2</sub>O<sub>3</sub>, Mn<sub>3</sub>O<sub>4</sub>, and MnO<sub>2</sub>, of surface areas (detd. by adsorption of N<sub>2</sub> at -195° according to Brunauer-Emmett-Teller) 2.41, 0.141, and 0.111 sq. m./g., resp. (1) The equil. pressures *p* of O<sub>2</sub> in mm. Hg, calcd. from the heats and entropies, at 500, 700, 1000, 1200°K., are: Mn<sub>2</sub>O<sub>3</sub> → Mn + 1/2 O<sub>2</sub>, 1.51 × 10<sup>-9</sup>; 2.76 × 10<sup>-9</sup>; 2.0 × 10<sup>-9</sup>; 1.48 × 10<sup>-9</sup>; Mn<sub>3</sub>O<sub>4</sub> → 3MnO + 1/2 O<sub>2</sub>, 0.18 × 10<sup>-9</sup>; 0.91 × 10<sup>-9</sup>; 7.2 × 10<sup>-9</sup>; 1.84 × 10<sup>-9</sup>; 3MnO<sub>2</sub> → 2MnO<sub>3</sub> + 1/2 O<sub>2</sub>, 2.52 × 10<sup>-9</sup>; 2.26 × 10<sup>-9</sup>; 3.38 × 10<sup>-9</sup>; 120.6; 2MnO<sub>2</sub> → Mn<sub>2</sub>O<sub>3</sub> + 1/2 O<sub>2</sub>, 1.92 × 10<sup>-9</sup>; 3.52, 145, -. Raptl. detns. for Mn<sub>2</sub>O<sub>3</sub>, at 1000, 1050, 1100°K., from the disocn. and the oxidation side, gave 3.0 and 3.7, 10.0 and 14.5, 28.0 and 46.0, as against the calcd. 3.98, 10.98, 27.60 mm. Hg; for MnO<sub>2</sub> at 700°K., from the disocn. side (the reverse oxidation does not take place), 3.6 as against the calcd. 3.52. (2) The velocities of disocn., *v<sub>d</sub>*, at const. temp., fall linearly with increasing pressure *p* of O<sub>2</sub>, *v<sub>d</sub>* = *k*(*p* - *p*<sup>0</sup>), where *p*<sup>0</sup> = the prevailing, *p* = the equil. pressure. From the max. *v<sub>d</sub>* (extrapolated to *p*<sup>0</sup> = 0), the apparent activation energies *E<sub>a</sub>* are, for MnO<sub>2</sub>, 38.3 kcal./mole, for Mn<sub>2</sub>O<sub>3</sub> ~ 60 kcal./mole. (3) The velocity of reduction *v<sub>r</sub>* of MnO<sub>2</sub> to MnO

between 300 and 500°K., at an initial *p<sub>0</sub>*, 200 mm., falls sharply with the progress of the reaction at its initial stages, the steep fall coming to a halt and bending over to a practically level portion (const. *v<sub>r</sub>*) at about 22, 40, and 50% reduction, at 400, 450, and 500°, resp.; *v<sub>r</sub>* then remains practically const. up to about 80-90% reduction, then falls to zero at 100%. This shape of the *v<sub>r</sub>* curve obviously indicates stepwise reduction, the initial steep branch corresponding to Mn<sub>2</sub>O<sub>3</sub> → Mn<sub>3</sub>O<sub>4</sub>. Analogous curves were obtained with initial *p<sub>0</sub>*, 100 and 50 mm. Plots of *v<sub>r</sub>* against the mean *p<sub>0</sub>*, at const. temp. and at the same stage of the reduction *r*, are straight lines, *v<sub>r</sub>* increasing linearly with *p<sub>0</sub>*, with slopes decreasing with progressing *r*; e.g., at 450°, *p<sub>0</sub>*, 10 and 200 mm. Hg, *r* 20%, *v<sub>r</sub>* 40 and 100 g. (g./min. × 10<sup>3</sup>); *r* 30%, *v<sub>r</sub>* 12 and 27. From linear plots log *v<sub>r</sub>* (1/*r*), the apparent activation energy *E<sub>a</sub>* of the reduction Mn<sub>2</sub>O<sub>3</sub> → MnO at *r* 20-40%, is 24.0 kcal./mole. (4) The shape of the *v<sub>r</sub>* curves as a function of *r*, at const. initial *p<sub>0</sub>*, for Mn<sub>2</sub>O<sub>3</sub> at 350, 400, 450, and 500°, is the same as in the case of MnO<sub>2</sub>. Plots of *v<sub>r</sub>* increasing with the mean *p<sub>0</sub>*, at const. temp. and *r*, are very slightly concave to the axis of *p<sub>0</sub>*. At equal *p<sub>0</sub>*, *v<sub>r</sub>* falls from *r* 10 to 20 to 30% but then remains independent of *r* (20-70%). The apparent *E<sub>a</sub>* is on the av. 22 kcal./mole at *r* 10-20%. (5) For the reduction of Mn<sub>2</sub>O<sub>3</sub>, *v<sub>r</sub>* as a function of *r*, at const. temp. and const. initial *p<sub>0</sub>*, (200, 100, and 50 mm.) passes through a max. (at about *r* 30%); this autocatalytic character of the curves is preserved even at lowest *p<sub>0</sub>* (in vacuum). Plots

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(over)

of  $v_r$  against  $p_{H_2}$  at const. temp. and const.  $r$  are distinctly concave to the axis of  $p_{H_2}$ ; at equal  $p_{H_2}$ ,  $v_r$  first increases with increasing  $r$  up to about 80%, then decreases.  $E_a = 22$  kcal./mole. The autocatalytic character of the reduction of  $Mn_2O_3$  accounts for the level portions of the  $v_r$  ( $r$ ) curves of  $Mn_2O_3$  and  $Mn_3O_4$ , as a result of the antagonistic effects of decreasing  $v_r$  of  $Mn_2O_3$  and  $Mn_3O_4$  and of increasing formation of  $Mn_2O_3$  and the self-acceleration of its reduction. (6) Comparison of the  $v_r$  ( $p_{H_2}$ ) curves of the 3 oxides shows that  $MnO_2$  is reduced faster only in the initial stages; at all other stages, the  $v_r$  of the 3 oxides are very close, the  $v_r$  curves of  $Mn_2O_3$  lying above those of  $Mn_3O_4$  and of  $MnO_2$  at  $r = 40\%$ . There is evidently no relation between the  $v_r$  and  $K_r$  and, on the other hand, the equil.  $p$  of the 3 oxides. Reduction by  $H_2$  evidently does not proceed over dissociation; thus, at 527°, the max.  $v_r$  (at  $p^* = 0$ ) for 1 g.  $Mn_2O_3$  is  $0.6 \times 10^{-4}$  g.  $O_2$ /min., whereas  $v_r$  (at 500° and  $p_{H_2}$ , 200 mm.) is  $150 \times 10^{-4}$ . The mechanism of the reduction consists in adsorption of  $H_2$  on the oxide, the slowest step being the chem. surface reaction which is inhibited by adsorption of the products. (7) The following equil. const.  $p_{MnO}/p_{H_2}$  (temp. in °K.) were calcd.:  $MnO + H_2 \rightleftharpoons Mn + H_2O$  (500°)  $1.2 \times 10^{-10}$ , (700°)  $2.4 \times 10^{-10}$ , (900°)  $5.62 \times 10^{-10}$ , (1200°)  $3.90 \times 10^{-9}$ , (2000°)  $1.78 \times 10^{-8}$ ;  $Mn_2O_3 + H_2 \rightleftharpoons 3 MnO + H_2O$ , (500°)  $7.24 \times 10^3$ , (700°)  $4.37 \times 10^3$ , (900°)  $3.39 \times 10^3$ , (1200°)  $1.2 \times 10^3$ , (2000°)  $3.47 \times 10^2$ ;  $3 Mn_2O_3 + H_2 \rightleftharpoons 2 Mn_3O_4 + H_2O$ , (500°)  $4.08 \times 10^{10}$ , (700°)  $2.19 \times 10^{10}$ , (900°)  $7.24 \times 10^9$ , (1200°)  $3.00 \times 10^9$ ;  $2 MnO_2 + H_2 \rightleftharpoons Mn_2O_3 + H_2O$ , (500°)  $3.39 \times 10^{10}$ , (700°)  $2.09 \times 10^{10}$ , (900°)  $3.90 \times 10^{10}$ . The difficult reducibility of  $MnO$  to  $Mn$  is due to the very low  $p_{MnO}$  at equil., and this distinguishes  $MnO$  sharply from the other 3 oxides; complete reduction of 1 g.  $MnO$  to  $Mn$  at 1000°K. under  $p_{H_2}$  200 mm., would require passing 4,000,000 l. dry  $H_2$  to carry away the  $H_2O$  vapor formed. N. T.

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TATIYEVSKAYA Ye, P.

26969 TATIYEVSKAYA Ye, P. , ZHURAVLEVA, M. G., CHUFAROV, G. I.- Kinetika Vosstano  
Vleniya Okislov Medi Okis'yu Ugderoda I Vodorodom. Izvestiya Akad. Nauk SSSR.  
Otd-Niye Tekhn. Nauk, 1949, No 8, S. 1235-41 -- Bibliogr: 10 NAZV.

SO: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949

TATIYEVSKAYA, Ye.P., ANTONOV, V.K. i CHUFAROV, G.I.

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O skorosti vosstanovlyeniya okislov margantsa vodorodom i okis'yu  
uglyerola. Doklady Akad. Nauk SSSR, Novaya Syeriya, T. LXVIII, No.3,  
1949, s.561-64

SO: LETOPIS' NO. 40

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Kinetics of the reduction of copper oxides by carbon monoxide and by hydrogen. K. P. Tikhonov, M. G. Zhuravleva, and G. I. Chufarov (Ural Branch Acad. Sci. U.S.S.R., Sverdlovsk). *Izvest. Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk* 1949, 1235-41. — One-gram samples of finely powd. CuO and Cu<sub>2</sub>O, of very nearly equal sp. surface areas (0.20 and 0.17 sq m./g., resp.) were reduced in a stream of H<sub>2</sub> or of CO circulating in a closed system (~0.5 l.) and passing through a liquid-air trap to freeze out the H<sub>2</sub>O or CO<sub>2</sub> produced; the degree of reduction was detd. by measurement of the pressure. As a function of the degree of reduction, the rate, in g. O<sub>2</sub>/min., passes through a max., i.e. the reduction is autocatalytic. At the same initial pressure of 200 mm. Hg, the rate of reduction of CuO, at any temp. (200, 250, 300, and 350°) is markedly greater with CO than with H<sub>2</sub>; thus, at 25% reduction, the rates with CO (at the above 4 temps.) are, approx., 0.007, 0.015, 0.028, and 0.043, and with H<sub>2</sub>, 0.001, 0.006, 0.017, and 0.030. At const. temp., 250°, the rate of the reduction with CO is nearly proportional to the initial pressure between 100 and 300 mm. Hg, but changes no further from 300 to 400 mm., as the amt. of CO becomes sufficient for complete reduction of the sample. In the reduction of CuO with H<sub>2</sub> at 300°, the rate, at all stages, increases with the initial pressure up to 400 mm. The apparent activation energies for the reduction of CuO by CO and by H<sub>2</sub> are 10.7 and 13.4

cal./mole, resp. The curves for Cu<sub>2</sub>O at the const. initial pressure of 200 mm. Hg, at the same 4 temps., show the same autocatalytic character. With H<sub>2</sub>, the curves for 300 and 350° are very close. With CO, the curves are normal at 200 and 250°, but at 300 and 350° there is a sharp fall of the rate immediately after the max. (at about 20% reduction), and final reduction does not exceed 50% even with excess of CO. This anomaly is attributed to sintering of the Cu<sub>2</sub>O which inhibits reduction by CO more effectively than by the more penetrating H<sub>2</sub>. At const. temp., 200°, the rate of reduction increases with the initial pressure up to 200 mm. Hg.; on further increasing pressure, the rate increases only with H<sub>2</sub>, not with CO. In contrast to CuO, reduction of Cu<sub>2</sub>O is, at any temp. and initial pressure, faster with H<sub>2</sub> than with CO. The apparent activation energies for the reduction of Cu<sub>2</sub>O by CO and H<sub>2</sub> are 10.0 and 13.7 kcal./mole, resp. The reversal of the rates of reduction with CO and with H<sub>2</sub> between CuO and Cu<sub>2</sub>O excludes the assumption of a disocn. of the oxide as the rate-dtg. step of the reduction, as in that case the rates ought to vary in the same way with the nature of the reducing gas. The observed facts can be explained only on the basis of a mechanism involving surface adsorption of the reducing gas, reaction between the adsorbed mole. and the O of the solid oxide, and desorption of the gaseous products. The rate-dtg. step is the surface reaction. It is understandable that solids with different crystal lattices should have different adsorption capacities for different gases, and that the rates of the surface reactions should be different. The observed rates of reduction of CuO and of Cu<sub>2</sub>O differ only by a factor of 2-3, whereas the disocn. pressure of CuO is about 10<sup>3</sup> times that of Cu<sub>2</sub>O. Consequently, the rate of reduction is not related to the disocn. pressure of the oxide. N. T.

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Velocity of reduction of manganese oxides by hydrogen and by carbon monoxide. N. P. Tikhonkaya, V. K. Antonov, and O. F. Chufarov. Doklady Akad. Nauk S.S.S.R. 68, 561-4(1949); cf. C.A. 43, 6624h. — Rates of the decrease of pressure of  $H_2$  or CO (after freezing out the  $H_2O$  or  $CO_2$  formed) on heating 1-g. samples of the Mn oxide under  $p = 80, 100,$  and  $200$  mm. Hg of the reducing gas, were detd. at  $80^\circ$  intervals in the range  $350-500^\circ$  for  $Mn_2O_7, Mn_2O_3,$  and  $Mn_2O$ , at different const.  $Q$  contents in the solid phase, and are plotted in g. O<sub>2</sub>/min. against  $p$ . Under the given conditions, the Mn oxides are reduced only to MnO which is taken as 100% reduction. At the same temp. and  $p$ , MnO<sub>2</sub> is reduced, at all stages, much faster by CO than by  $H_2$ . For Mn<sub>2</sub>O<sub>3</sub>, reduction by CO is faster only at low degrees of reduction, whereas from 40% reduction upward,  $H_2$  reduces faster than CO. This is the result of the two-stage reduction of Mn<sub>2</sub>O<sub>3</sub>, first to Mn<sub>2</sub>O, then to MnO. For Mn<sub>2</sub>O, reduction by CO is actually slower than by  $H_2$ , at all stages. The apparent activation energies for the reduction by CO and by  $H_2$ , are, for MnO<sub>2</sub>, 10.2 and 24.0, for Mn<sub>2</sub>O<sub>3</sub>, 28.0 and 22.0, for Mn<sub>2</sub>O, 25.5 and 22.0 kcal./mole. N. Thos

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The rates of reduction of iron oxides. R. P. Talley, A. I. Chubarov, and V. K. Antimov (Acad. Sci. U.S.S.R.; Sverdlovsk). *Zhur. Fiz. Khim.* 24, 385 (1950).—Although the equil. pressure (calcd.) of  $H_2$  over  $Fe_3O_4$  is much greater than over  $Fe_2O_3$  or  $FeO$ , all 3 oxides are reduced by  $H_2$  at similar rates, showing that reduction is independent of dissociation and that reduction of  $FeO$  is not the slowest stage in the reduction of higher oxides. The surface area of the oxides (from  $N_2$  adsorption at  $-195^\circ$ ) was 0.85, 0.80, and 0.80 sq.m./g. for  $Fe_3O_4$ ,  $Fe_2O_3$ , and  $FeO$ , resp. The oxides were heated in  $H_2$ , the  $H_2O$  formed was frozen out, and the rate  $r$  of reaction was calcd. from the decrease in pressure  $p$ . In one expt.,  $r$  first increased to a max. at 10–30% reduction and then decreased again. When the original  $p$  ( $p_0$ ) was 200 mm. Hg, the max.  $r$  of  $Fe_3O_4$  was about 7, 16, 37, and  $95 \times 10^{-4}$  g. O for g.  $Fe_3O_4$  and min. at 350, 400, 450, and 500°, resp.; the max.  $r$  of the other oxides were, e.g., 10% less. At reductions below 10%,  $r$  was proportional to  $p^2$ , and the const.  $a$  was at 400 and 450° 0.68 and 0.83 for  $Fe_3O_4$ , 0.64 and 0.70 for  $Fe_2O_3$ , and 0.5 and 0.55 for  $FeO$  when  $p_0$  varied from 0 to 220 mm. Hg. The apparent energies of activation were 10,600, 13,200, and 14,100 cal./mole. J. J. H.

TATIEVSKAYA, YE. P.

USSR/Chemistry, Metallurgy - Copper Jan 52

"Retarding Effect of Gaseous Reaction Products on the Rate of Reduction of Copper Oxides With Hydrogen and Carbon Monoxide," G. I. Chufarov, B. D. Averbukh, Ye. P. Tatievskaya, V. K. Antonov, Ural Affiliate, Acad Sci USSR, Inst of Chem and Metallurgy, Sverdlovsk

"Zhur Fiz Khim" Vol XXVI, No 1, pp 31-38

Gaseous products of the reaction, on being adsorbed at the reaction surface, bring about a sharp lowering of the rate of reduction. A quant expression for the retarding effect of  $\text{CO}_2$  is given. The retarding effect of water vapor is greater for cuprous oxide than cupric oxide is greater. The relation between the values of adsorption of  $\text{H}_2$  and  $\text{CO}$  is in good agreement with kinetic data for  $\text{CuO}$ . When  $\text{Cu}_2\text{O}$  is reduced with  $\text{CO}$ , there is recrystn of newly formed metallic copper, so that the rate of the reaction is greatly lowered.

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... of gas from the upper and has its lower end ...  
... of gas from the upper and has its lower end ...

are presented together with data on the

Effect of flux rate on distribution of iron. G. I. Kondraty, M. G. Zhuravskaya, & T. I. Ustyakova, B. D. Zhuravskikh, and Y. K. Anisimov. *J. Appl. Chem. U.S.S.R.* 18, 6700 (1965) (1965) Engl. translation--See C.A.B. 48, 6700 H. L. H.

11 204

TATIYEVSKAYA, Ye. P.

Chemical Abst.  
Vol. 48 No. 9  
May 10, 1954  
Metallurgy and Metallography

⑤ net

Effect of flux moisture on dip-tinning of iron. O. I. Chufarov, M. O. Zhuravieva, Ye. P. Tatievskaya, B. D. Averbukh, and V. K. Antonov. *Zhur. Priklad. Khim.* 26, 652-4 (1953).—In dip-tinning of Fe, excessive H<sub>2</sub>O in ZnCl<sub>2</sub> flux dissolves Fe rapidly and forms FeSn<sub>3</sub> scum and sludge. This increases Sn consumption and contaminates the coating with scum. When the flux is almost anhyd., cleaning of Fe is very slow and bare spots may remain on the surface.

The optimum H<sub>2</sub>O content of the flux is 1.5-3.5%, corresponding to b.p. 250-275°. The b.p. is an important characteristic of the flux. E. M. Elkin

TATIYEVSKAYA, Ye. P.

USSR/Chemistry

Card 1/2

Authors : Chufarov, G. I., Averbukh, B. D., Tatievskaya, E. P., and Antonov, V. K.

Title : Inhibiting effect of gaseous reaction products on the rate of reduction of ferric oxides with hydrogen and carbon monoxide.

Periodical : Zhur. Fiz. Khim. 28, Ed. 3, 490-497, March 1954

Abstract : The authors investigated the effect of gaseous reaction products on the rate of reduction of ferric oxides with carbon monoxide and hydrogen in a pressure range of from 100-250 mm mercury column and also measured the adsorption of basic gases and gases obtained during reduction on the surfaces of the oxides. The inhibiting effect of the gaseous reaction product  $\text{CO}_2$  during the reduction of  $\text{Fe}_3\text{O}_4$  and  $\text{FeO}$  with carbon monoxide can be computed quantitatively by calculating the rate of reaction according to a certain equation. During reduction of  $\text{Fe}_3\text{O}_4$  with carbon monoxide and hydrogen at temperatures above  $700^\circ$  there is practically no inhibiting effect of the reaction products during the initial stages, but after

Zhur. Fiz. Khim, 28, Ed. 3, 490-497, March 1954

(additional card)

Card 2/2

Abstract : Reduction reached 11%, when a greater amount of  $Fe_3O_4$  is formed, the inhibiting effect of carbon monoxide and water vapor becomes great. The experimental material on the inhibiting effect of gaseous reaction products on the rate of reduction of the investigated ferric oxides is in agreement with the data regarding the adsorption of gaseous reducing agents and reaction products on the surface of the mentioned oxides. Seven U.S.S.R. references since 1937. Graphs.

Institution : Acad. of Sc. U.S.S.R. Ural Branch, Institute of Chemistry and Metallurgy, Sverdlovsk

Submitted : June 15, 1953

TATIYEVSKAYA, Ye. P.

USSR/Chemistry - Metallurgy

Card 1/1

Authors : Tatievskaya, E. P., Chufarov, G. I., and Stafeyeva, N. M.

Title : Reduction of cupric oxides with graphite

Periodical : Zhur. Fiz. Khim., 28, Ed. 5, 843 - 850, May 1954

Abstract : The rate of reduction of  $\text{CuO}$  and  $\text{Cu}_2\text{O}$  with graphite in vacuum and in the presence of gaseous reaction products was investigated. Pure carbon dioxide was found to be the product of the reduction reaction. The rate of reduction of cupric oxides with graphite in the presence of a gaseous reaction product is greater than in vacuum which indicated the participation of the gaseous phase in the reduction process. The reduction with a solid reducing agent consists of two phases: reduction of the oxide with carbon monoxide and the reaction of the formed  $\text{CO}_2$  with the graphite. Nineteen references: 14-USSR, 2-German, 2-English and 1-USA. Graphs, drawing.

Institution : Acad. of Sc. USSR, Ural Branch, Institute of Chemistry and Metallurgy, Sverdlovsk

Submitted : Aug. 23, 1953

TATIYEVSKAYA, Ye. P.

20-4-35/51

AUTHORS: Lisnyak, S. S., Tatiyevskaya, Ye. P.  
Chufarov, G. I., Corresponding Member of the AN USSR.

TITLE: The Reduction of Higher Iron Oxides by Graphite and Charcoal With the Addition of  $\text{Na}_2\text{CO}_3$  and  $\text{K}_2\text{CO}_3$  (Vosstanovleniye vysshikh oksidov zheleza grafitom i drevesnym uglem s dobavkami  $\text{Na}_2\text{CO}_3$  i  $\text{K}_2\text{CO}_3$ ).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 4, pp. 656-659 (USSR)

ABSTRACT: The purpose of present investigation is the clearing of the kinetics and of the mechanism of the reaction mentioned in the title, since there are only few data about it in the papers published up to now. The experimental method is described. Figure 1 shows that the reduction of iron oxide by charcoal takes place with a considerable velocity already at  $700^\circ$ . At  $750^\circ$  the reduction took place quicker than in the case of use of graphite at  $850^\circ$ . The addition of  $\text{Na}_2\text{CO}_3$  and  $\text{K}_2\text{CO}_3$  accelerated the reduction by charcoal at  $700^\circ$  only to an unimportant extent. In the case of graphite the acceleration at  $800^\circ$  was greater. The reduction of the magnetic iron oxide began at  $800^\circ$  (figure 2), by graphite at  $950^\circ$  (figure 3). The addition of  $\text{Na}_2\text{CO}_3$  and  $\text{K}_2\text{CO}_3$  accelerated the reduction velocity of  $\text{Fe}_3\text{O}_4$  by both coal species. This was the case with charcoal at  $800^\circ$  to an unimportant extent. The addition of the two carbonates at  $850^\circ$  accelerated the reaction to a great

Card 1/3

The Reduction of Higher Iron Oxides by Graphite and Charcoal With the Addition of  $\text{Na}_2\text{CO}_3$  and  $\text{K}_2\text{CO}_3$ . 20-4-35/51

reactivity and to a facilitation of the reconstruction of the crystallisation lattice in the oxide phase. Apparently this takes place by means of a previous decomposition of the addition in  $\text{Me}_2\text{O} + \text{CO}_2$  on the reaction surfaces of the oxide and the carbon. Therefore the acceleration increases with the temperature. Finally the composition of the gaseous products and their rôle in the single oxides is discussed. There are 3 figures, and 9 references, 6 of which are Slavic.

ASSOCIATION: Institute for Metallurgy of the Ural Branch AN USSR (Institut metallurgii Ural'skogo filiala Akademii nauk SSSR)

SUBMITTED: June 4, 1957

AVAILABLE: Library of Congress

Card 3/3

CHUFAROV, G.I.; TATIYEVSKAYA, Ye.P.; ZHURAVIEVA, M.G.; AVERBUKH, B.D.;  
LISNYAK, S.S.; ANTOHOV, V.K.; BOGOSLOVSKIY, V.N.; STAFYEVA, N.M.

Kinetics and mechanism of the reduction of metal oxides and chemical  
compounds. Trudy Inst. met. UFAK SSSR no.2:9-40 '58. (MIRA 12:4)

(Oxidation-reduction reaction) (Metallurgy)

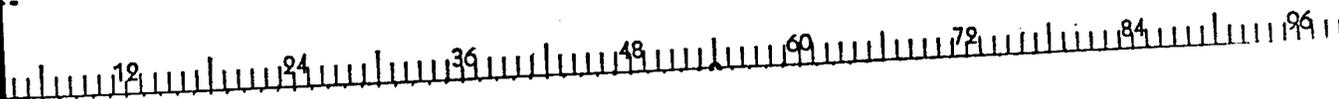
SLAVIKOVSKIY, N.A.; TATIYEVSKIY, A.M.

First experience in the maintenance of continuous tracks. Put' 1  
put.khoz. 4 no.9:3-5 8 '60. (MIRA 13:9)

1. Glavnyy inzhener Putevoy dorozhnoy mashinnoy stantsii No.1 Moskovskoy dorogi (for Tatiyevskiy).  
(Railroads--Maintenance and repair)

TATIEVSKIY, V.M.; KOROBV, V.V.; MENDZHEVITSKIY, Ye.A.

Chemical structure of hydrocarbons and equations for heats of formation.  
C.R. Acad. Sci., URSS, '51, 78, 67-69. (MLRA 4:4)  
(BA - A I Ja '53:31)



RYABINOV, M.G.; TATIYEVSKIY, V.M.; VOLYNSKIY, R.F.

In the Termez Division. Put' 1 put. khoz. 8 no.6:6-7 '64. (MIRA 17:9)

1. Termezskaya distantsiya puti Sredneaziatskoy dorogi.

RYABINOV, M.G., inzh. (Leningrad); TATIYEVSKIY, V.M., inzh. (Leningrad);  
KHOROMETSKIY, V.A., inzh. (Leningrad)

Technology of the substitution of graphite lubrication.

Put' i put. khoz. 9 no.3:19-20 '65.

(MIRA 18:6)

RYABINOV, M.G., inzh. (Leningrad); TATIYEVSKIY, V.M., inzh. (Leningrad);  
KHOROMETSKIY, V.A., inzh. (Leningrad)

Use of a tamper in the current track maintenance. Put' i put.khoz.  
9 no.5:29-30 '65. (MIRA 18:5)

MASHEVSKIY, N.; TATKALO, G.

Order for the receiving of cattle in the Kiev Meat Combine.  
Mias. ind. SSSR 33 no.4:32-33 '62. (MIRA 17:2)

1. Kiyevskiy myasokombinat.

SOLOVEYCHIK, B.; TATKALO, G.

Improve the conditions of beef cattle delivery to meat combines.  
Mias.ind.S.S.S.R. 33 no.6:35-36 '62 (MIRA 16:1)

1. Kiyevskiy myasokombinat.  
(Kiev ~~Meat~~ industry) (Beef cattle)

*TatKalo, I.V.*

VARTANYAN, V.Ye., kandidat meditsinskikh nauk; TATKALO, I.V. (Krasnodar)

Congenital sarcoma in newborn. Khirurgia no.9:69 S '54. (MLRA 7:12)

(SARCOMA, shoulder, congen. in newborn)

(SHOULDER, neoplasms, sarcoma, congen. in newborn)

(INFANT, NEWBORN, diseases, sarcoma of shoulder)

TATKALO, I.V. (Yerevan, prospekt Stalina, d.99, kv. 11)

Preservation of skin homotransplants. Vest.khir. 83 no.11:76-79  
N 159. (MIRA 13:4)

1. Iz kliniki obshchey khirurgii (sav. - prof. S.S. Sharimanyan)  
Yerevanskogo meditsinskogo instituta.  
(SKIN TRANSPLANTATION)

TATKALO, I.V.

Combined autohemotransplantation of the skin. *Khirurgia* 36  
no.11:55-59 N '60. (MIRA 13:12)

1. Iz kafedry obshchey khirurgii (zav. - zasluzhemnyy deyatel'  
nauki prof. S.S. Sharimanyan) Yerevanskogo meditsinskogo  
instituta.

(SKIN GRAFTING)

SARUKHANYAN, V.O., prof.; MINASYAN, A.O., kand.med.nauk; SARKISYAN, Yb.Kh.,  
kand.med.nauk; MIRZA-AVAKYAN, G.L.; TATKALO, I.V.; AYRAPETYAN, L.H.

Stomach cancer as per data of Erevan clinics and the Institute of  
Roentgenology and Oncology of the Academy of Sciences of the  
Armenian S.S.R. for 1949-1957. Vop.rent.i onk. 6:221-231 '61.

(MIRA 16:2)

(ERIVAN—STOMACH—CANCER)

TATKALO, I.V.

Injury of the right ventricle of the heart. Zhur. eksp. i klin.  
med. 5 no.3:37-39 '65. (MIRA 19:1)

ACC NR: AR6018962

SOURCE CODE: UR/0271/66/003/002/A009/A009

AUTHOR: Tatkin, L. Z.; Yerlykov, N. S.

TITLE: A multicircuit time delay relay using contactless elements

SOURCE: Ref zh. Avtomat telemekh i vychisl tekhn, Abs. 2A59

REF SOURCE: Tr. N.-i. proyektno-konstrukt. in-ta tekhnol. mashinostr., no. 1, 1965, 44-51

TOPIC TAGS: time relay, delay circuit, electric relay

ABSTRACT: A time delay relay using contactless circuits is described. It was developed at the NIIT mash. The relay is capable of generating sequentially up to 25 time delays from 1 sec up to 16 hr. The time delay relay is based on the pulse counter principle utilizing the MKO-LC ferrite-diode cells. The utilization of these cells assures a maximum noise immunity under workshop operating conditions. The 50 cps power frequency serves as a choke. The pulse counter counts down from the preset time interval corresponding to specific number of pulses. The desired time delay is set up by means of switches. These are calibrated to read directly in seconds, minutes, and hours facilitating easy manipulation. The relays have a relative error of 0.5%. Tests have shown them to be highly reliable. [Translation of abstract] 7 illustrations and bibliography of 4 titles. T. R.

SUB CODE: 09

Card 1/1

UDC: 621.318.563.5

TATKO, B.S., inzhener.

Remarks on the planned division of rules on "Bus bar wiring." Elektri-  
chestvo no.5:81-82 My '53. (MLRA 6:6)  
(Electric cables)

TATKO, B.S., inzhener.

Aluminum alloy for building superpowerful generators (Abstract from  
Electrical Engineering No. 11:1031, 1052 '53). Elektrichestvo no.6:  
74 Je '53. (MLRá 6:7)

(Dynamos) (Aluminum alloys)

*Index*

COUNTRY : POLAND E  
CATEGORY : Chemical Technology. Chemical Products and Their  
Application. Water Treatment. Sewage.  
ABS. JOUR. : RZhKhim., No 17, 1959, No. 61228  
AUTHOR : Tatko, T.  
INSTITUTE : -  
TITLE : Present Situation Regarding the Purification of  
Effluent Waters in Poland.  
ORIG. PUB. : Gas, woda i techn. sanit., 1958, 32, No 9, 342-344  
ABSTRACT : No abstract.

Card: 1/1

H - 15

NEGGOVOROV, B.Ye., podpolkovnik meditsinskoy sluzhby; TATKO, TS.S.,  
kapitan meditsinskoy sluzhby

Laboratory diagnosis of leptospirosis and examination of marine  
rodents carriers of Leptospira. Voen.-med. zhur. no.6:70-73 Je '51.  
(LEPTOSPIROSIS) (MIRA 9:9)  
(RODENTS AS CARRIERS OF DISEASE)

*TAT KLL, v. 1/6*

AUTHOR: Tat'kev, V.A., Candidate of Technical Sciences 118-58-6-5/21  
TITLE: ~~The Hydraulic Transportation of Coal~~ (Gidravlicheskoye transportirovaniye uglya)  
PERIODICAL: Mekhanizatsiya trudoymkikh i tyazhlykh rabot, 1958, Nr 6, pp 13-15 (USSR)

ABSTRACT: Hydraulic coal transportation is the most important technological part of hydraulic mining. The author distinguishes the transportation at the faces, the underground transportation proper, the hydraulic lifting and the transportation from the mine to the concentration plant or directly to the consumer. At the Kuzbass, coal is usually transported from the coal face to the coal pump of the hydraulic lifting device through chutes, but if there is no slope, then the transportation is carried out in tubes under pressure, using 6NZ and 8NZ suction pumps, 5ShNV coal pumps or the automatic coal pump of the type 8USP. Different coal pumps are used for hydraulic lifting, the latest and best model is the 10UVT 2m, constructed by the Bobruyskiy mashinostroitel'nyy zavod (the Bobruysk Machine Construction Plant). It has a lifting capacity of 900 cu m of coal pulp per hour under a head of 250 m. There is 1 graph, 1 photograph, and 1 diagram.

Card 1/1

1. Coal--Transportation 2. Hydraulics--Applications

BORISOV, A.I.; NEGODAYEV, M.N.; TAT'KOV, V.A.

Use of high-speed motion-picture photography for the visualization of the hydrodynamic process in a coal-suction machine.  
Zhur. nauch. i prikl. fot. i kin. 9 no.3:168-171 My-Je '64.  
(MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut dobychi  
uglya gidravlicheskim sposobom (VNII Gidrougol'), Novokuznetsk.  
Submitted January 18, 1963.

TAT'KOV, V.A., kand.tekhn.nauk; YURIN, P.I., inzh.

Using capron for coal suction pumping machinery elements and the  
technology of their manufacture. Trudy VNIIGidrouglia no.1:  
81-89 '62. (MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy  
institut dobychi uglya gidravlicheskim sposobom.

TAT'KOV, V.A., kand. tekhn. nauk

Structure of the flow in impeller passages of dredges and  
hydraulic coal dredges. Trudy VNIIGidrouglia no.4:47-65 '64.  
(MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-  
konstruktorskiy institut dobychi uglya gidravlicheskim sposobom.

USSR/Farm Animals - Large Horned Cattle.

Q-2

Abs Jour : Ref Zhur - Biol., No 18, 1958, 83369

Author : Tatlauskas, Ts.I.

Inet : Lithuanian Scientific Research Institute of Animal Husbandry and Veterinary Medicine.

Title : Effects of Variegated Keeping Conditions of Cows at Night upon Their Physiological State and Their Productivity.

Orig Pub : Byul. nauchno-tekhn. inform. Lit. n.-i. in-t zhivotnovodstva i veterinarii, 1957, No 1, 49-55.

Abstract : On the experimental farm of the Lithuanian Scientific Research Institute of Animal Husbandry and Veterinary Medicine experiments were performed on 2 groups of cows. At night the experimental group (1st) was kept in an enclosure on the field, and the control group (2nd) in winter quarters. In the cows of the 2 groups the indicators of

Card 1/2

USSR/Farm Animals - Large Horned Cattle.

Q-2

Abs Jour : Ref Zhur - Biol., No 18, 1958, 83369

physiological conditions and productivity were diversified. At air temperature of  $18.5^{\circ} [C]$ , the pulse rate was by 7.9 percent and the respiration rate by 28.7 percent lower in cows of 1st group than in cows of the 2nd group. Hematologic indicators showed changes also. In the 1st group Hb amounts increased by 14, and the number of erythrocytes by 19.12 percent; in the 2nd group the increases amounted to 6.2 and 4.32 percent, respectively. During 90 days in 1955, cows of the 2nd group gave 6.1 percent less milk than did cows of the 1st group.

Card 2/2

TATLAUSKAS, Ts. I. Cand Agr Sci -- (diss) "Effect of various methods of  
summer <sup>maintenance</sup> ~~time~~ ~~feeding~~ of cows upon their physiological state and productivity  
under conditions of the Lithuanian SSR." Mos, 1959. 19 pp (Mos Order of Lenin  
Agr Acad im K. A. Timiryazev), 110 copies (KL, 50-59, 128)

**"APPROVED FOR RELEASE: 07/16/2001**

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**APPROVED FOR RELEASE: 07/16/2001**

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INDUSTRIAL GAMMA-DEFECTOSCOPY. L. K. JAKUBIK.

1955. Moscow, Mashinostroenie, 1955. 114 p.

A manual for industrial examination of metallic articles by  $\gamma$  rays from radioactive cobalt and iridium isotopes. Description of equipment employed in defectoscopy in the photographic and ionization methods. Methods of dosimetry of  $\gamma$  radiation, experience in the use of  $\gamma$  defectoscopy at the plant; organization of labor in  $\gamma$  defectoscopy and safety engineering. (publisher's note)

BTZ

100

TATOCHENKO, L. K., MEDVEDEV, S. V. and TOKMAKOV, V. S.

"Application of radio active iridium for gamma defect detection", appearing in the "Detection of Defects in Metals by Gamma -- Collection of Papers", (Gamma Defektoskopiya Metallov -- Sbornik Statei), published by the Academy of Sciences USSR, p 94, 1955.

*TATOCHENKO, L.K.*

USSR / Structural Crystallography.

E-3

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9191

Author : Tatochenko, L.K.

Title : Radiation from an X-Ray Tube Fed With Alternating Current.

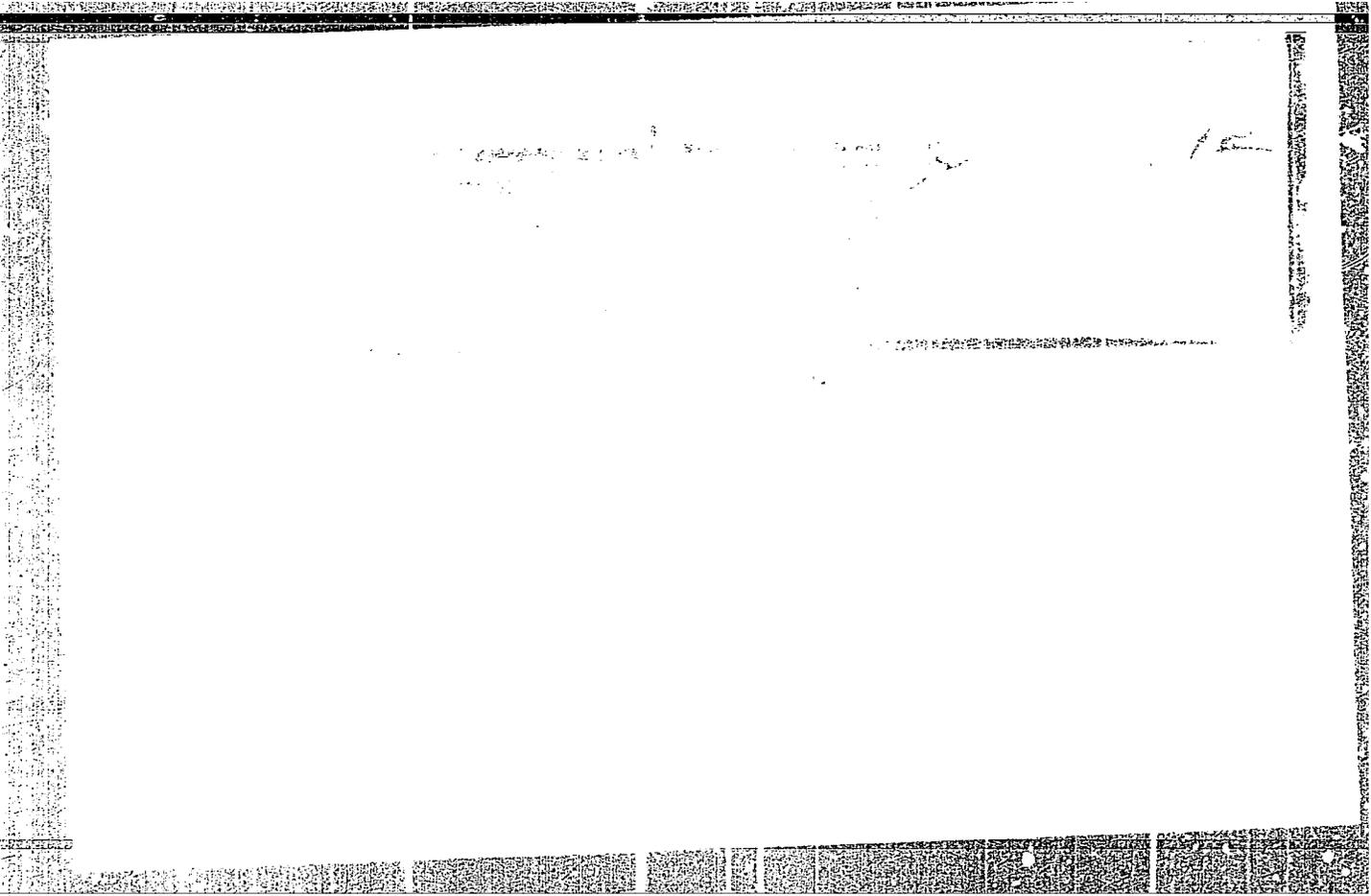
Orig Pub : Probl. metalloved. i fiz. metallov, sb. 4, 1955, 648-654

Abstract : No abstract

Card : 1/1

TATOCHEMKO, L.K.

Measuring liquid metal levels by means of rays. Probl. metalloved.  
i fiz. met. no.4:655-664 '55. (MIRA 11:4)  
(Liquid metals) (Gamma rays--Industrial applications)



**"APPROVED FOR RELEASE: 07/16/2001**

**CIA-RDP86-00513R001755120001-9**

**APPROVED FOR RELEASE: 07/16/2001**

**CIA-RDP86-00513R001755120001-9"**

TATOCHEKHO, L.K.

Automatic control of continuous pouring of steel. Stal' 16 no.3:  
212-214 Mr '56. (MLRA 9:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallur-  
gii.  
(Smelting) (Radioisotopes--Industrial applications) (Automatic control)



TATOCHENKO, L. K.

**AUTHORS:** Tatochenko, L. K., and Lyndin, V. V.

**TITLE:** Phase-impulse Method of Determining the Curie Point (Fazo-impul'snyy metod opredeleniya tochki Kyuri)

**PERIODICAL:** Zavodskaya Laboratoriya, 1957, Vol. 23, No. 1, pp. 61-64 (U.S.S.R.)

**ABSTRACT:** For rapid determination of the Curie point the authors propose a device with phase-impulse indication of magnetic permeability. The specimen studied is placed inside a heater located within a solenoid. The solenoid, connected in series with active resistance, is fed from a generator of HF AC. The voltage phase on the resistance coincides with the current phase. The inductivity of the solenoid depends on the magnetic properties of the specimen. The authors developed formulas for the mathematical computations required. Illustrations accompany the text: drawing showing the principles of the phase-impulse indicator, block diagram of the indicator, circuit of the indicator showing its principles, and a schematic diagram of the transmitter unit. The device is found successful in the study of ferromagnetic alloys.

**ASSOCIATION:** Central Scientific-Research Institute for Ferrous Metallurgy (Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii)

Card 1/2

Phase-impulse Method of Determining the Curie Point

PRESENTED BY:

SUBMITTED:

AVAILABLE:

Card 2/2

Tatochenko, L.A.

AUTHORS Tatochenko, L.K., Lyndin, V.V., 32-8-34/61  
Tokmakov, V.S., Moysh, Yu.V.,  
Sabinin, P.G., Shohebrov, M.N.

TITLE An Automatic Magnetic Defectoscope for Controlling  
Bar Materials.  
(Avtomatizirovanny magnitnyy defektoskop dlya  
kontrolya prutkovykh materialov.)

PERIODICAL Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 8,  
pp. 967-969 (USSR)

ABSTRACT For controlling bar-like and cylindrical objects of  
production, where the defects are mostly to be sought  
in the direction of the axis, magnetization by a  
magnetic circulation field is used which is effected  
by the passage of current along the bar to be in-  
vestigated. The amperage is chosen according to the  
cross section of the bar to be investigated, namely  
according to the formula:  $I = (10 \pm 20) d$ , where I  
signifies the amperage and d the cross section of  
the object. The so-called defectoscope was constructed  
on the basis which is described here. This apparatus,  
however, only permits to make random tests. An automatic

CARD 1/2

32-8-34/61

An Automatic Magnetic Defectoscope for Controlling Bar Materials.

control was experimentally worked out by the Ural branch of the Academy of Sciences of the USSR for the Plant imeni Serov. In this construction the object (bar) was immersed into a tub with magnetic suspension and at the same time current was sent through it. The method proved to be somewhat more practical, but the secondary functions made the control cumbersome. The paper further describes a new device which permits further automatization of the above-mentioned functions. On the slant plane the rolling bars are one by one automatically clamped, then they are in a circular movement immersed to the tub (as above with the passage of current) and finally they are let out of the clamps on the other side of the slant plane where they again begin rolling. This automatic operation takes 7 seconds per bar. Such an apparatus is already used in the Elektrostal' Works.

(3 illustrations, 3 references)

ASSOCIATION:

Central Scientific Research Institute for Ferrous Metallurgy.  
(Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii)

AVAILABLE:  
CARD 2/2

Library of Congress.

DIKUSHIN, V.I., akad., otv. red.; SHUMILOVSKIY, N.N., red.; ZASLAVSKIY,  
Yu. S., red.; ~~TATOCHEVSKO, L.K., red.~~; VERKHOVSKIY, B.I., red.;  
NAZAROV, S.T., red.; PETRENKO, L.I., red.; ZELEVINSKAYA, N.G., red.;  
BELYANIN, P.N., red. izd-va.; POLENOVA, T.P., tekhn. red.

[Machine and instrument manufacture; proceedings of the conference]  
Mashinostroenie i priborostroenie; trudy konferentsii. Moskva, Izd-vo  
Akad. nauk SSSR, 1958. 358 p. (MIRA 11:12)

1. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu  
radioaktivnykh i stabil'nykh izotopov i islucheniya v narodnom  
khoz'yaystve i nauke. Moscow, 1957.

(Radioisotopes--Industrial applications)

(Metals)

ZLOBINSKIY, Boris Mikhaylovich; ~~TATOCHENKO, L.K., red.~~; KHUTORSKAYA, Ye.S.,  
red. izd-va; DOBUZHINSKAYA L.V., tekhn. red.

[Safety in work with radioactive substances] Bezopasnost' rabot s  
radioaktivnymi veshchestvami. Moskva, Gos. nauchno-tekhn. izd-vo  
lit-ry po chernoi i tsvetnoi metallurgii, 1958. 227 p. (MIRA 11:8)  
(Radioactive substances--Safety measures)

DUDKIN, Vladimir Alekseyevich; BRYANTSEVA, V.P., inzh., ved. red.;  
TATOCHENKO, L.K., kand. tekhn. nauk, red.; SOROKINA, T.M.,  
tekhn. red.

[Investigating by means of radioactive tracers the formation of chemical heterogeneity in the axial zone of an ingot during the crystallization of killed steel] Issledovanie protsessa obrazovaniia khimicheskoi neodnorodnosti oasevoi zony slitka pri kristallizatsii spokojnoi stali metodom radioaktivnykh indikatorov. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 27 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 23. No.M-58-110/2) \* (MIRA 16:3)  
(Steel ingots) (Radioactive tracers)

S/137/61/000/012/083/149  
A006/A101

AUTHORS: Latyshev, V. K., Pliskin, Yu. S., Matochenko, L. K., Felinger, A. K.

TITLE: A device to measure the thickness of rolled sheets

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1961, 14, abstract 12D93  
(V sb. "Radioakt. metody kontrolya i regul. proizvodstva protsessov",  
Riga, AN LatvSSR, 1959, 73-79)

TEXT: TsNIChM developed a device to measure the thickness of rolled sheets (for a thickness  $\geq 7$  mm) operating by the system of dynamic compensation. Unlike the method of static compensation, this system is free of mechanical feed-back and variable shifts. The measuring device makes it possible to record changes in thickness by 0.2 mm at 35 mm total thickness of the sheet, and an intensity of the measuring  $Co^{60}$  source on the order of 15 Curie. The measuring unit of the device is not connected with the kinematic drive, causing the motion of the wedge. This makes it possible to accelerate the operational speed of the device by increasing the shifting speed of the wedge. Compensation in the system is brought about by changing the amplification factor of the photomultiplier by varying the voltage on the dynode. V. D'yakov

[Abstracter's note: Complete translation]

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S/137/62/000/004/131/201  
A060/A101

AUTHORS: Tatochenko, L. K., Moysh, Yu. V., Lyndin, V. V., Tokmakov, V. S.

TITLE: Magnetic dust method of control in metallurgy

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 87, abstract 41524  
("Sb. tr. In-t metalloved. i fiz. metallov Tsent. n.-1. in-ta  
chernoy metallurgii", 1959, 6, 460-465)

TEXT: A use is proposed for rod-shaped ferromagnetic material for the magnetic dust method of control. The overall view and the electrical diagram of a magnetic defectoscope are given, which make it possible to carry out the semiautomatic control of steel rods with 5 - 22 mm diameter and length 1,500 - 4,000 mm. The main units of the flaw detector are: the receiving and control stand, the vat filled with a magnetic emulsion, and the main shaft with clamps for the rods, whose rotation is realized by an asynchronous motor with power 1.7 kw, 1,000 rpm, through a worm-gear reducer, a cam gear, a geared sector, and a cog-wheel torque-limiting clutch. The switching on and off of current passed through the rod while the latter passes through the vat (in the course of ~3sec) is carried out automatically by means of a terminal switch. The current up to

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Magnetic dust method of control in metallurgy

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1,000. amps at a rod potential up to 12 volts is regulated by the connection of a varying number of sections of the primary winding of the transformer to the power grid. There are 7 references.

A. Romanov

[Abstracter's note: Complete translation]

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TATOCHEIKO, L.K.; LYNDIN, V.V.

Equipment for rapid Curie point determination. Probl. metalloved.  
i fiz. met. no. 6:485-491 '59. (MIRA 12:8)  
(Curie point) (Ferromagnetism--Testing)

S/137/62/000/003/010/191  
A006/A101

AUTHORS: Latyshev, V. K., Pliskin, Yu. S., Tatochenko, L. K.

TITLE: An automatic level regulator for a continuous steel-teeming unit

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 11, abstract 3B67  
("Sb. tr. In-t metalloved. i fiz. metallov Tsentr. n.-i. in-ta  
chernoy metallurgii", 1959, v. 6, 512-519)

TEXT: In the Soviet Union the automatic control of the liquid steel level in the crystallizer of a continuous casting unit was for the first time developed in 1955 at the Plant imeni 1st May of MES USSR. In this unit the level control was brought about by changing the speed of drawing the ingot. The regulation of the roll speed was first carried out manually with the aid of a rheostat connected to the excitation circuit of the generator. However, at a speed of drawing the ingot, raised to 4 m/min (and in future to 7 m/min according to projects) manual control becomes impossible. At the Institute of Metal Working and Physics of Metals, TsNIICM developed the P<sub>V</sub>-2 (RU-2) type automatic level control device. Its schematic diagram is given and the operational principle

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An automatic level regulator ...

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is described. The static calculation of the control system is also presented.

G. Lyubimova

[Abstracter's note: Complete translation]

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